Utah Department of Transportation
Traffic Management Division

November 2016

Monthly Report

2060 South 2760 West Salt Lake City, Utah 84104 801-887-3710 www.udottraffic.utah.gov

Mission of the Traffic Management Division

- To Support UDOT and the Department of Public Safety to Achieve Zero Fatalities.
- To Help Provide Reliable and Efficient Travel Throughout Utah.
- To Provide Useful and Timely Real-time Traffic Information.
- To Work Together with Other Government Agencies to Serve the Public.
- To Provide Excellent Customer Service.

Traffic Operations Center

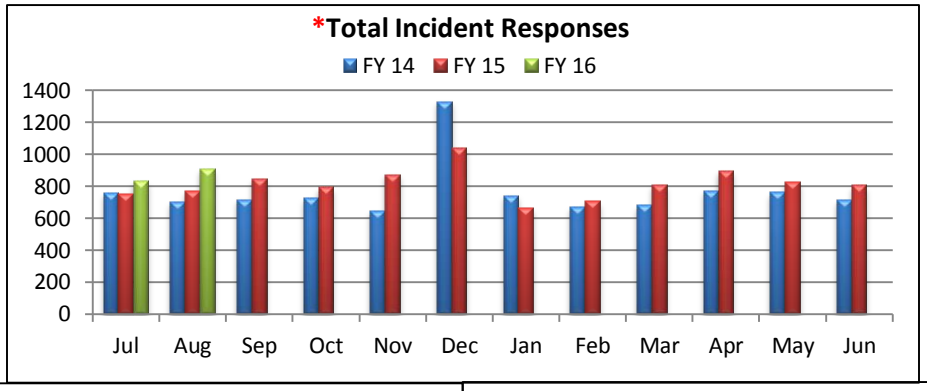
Field Devices Summary

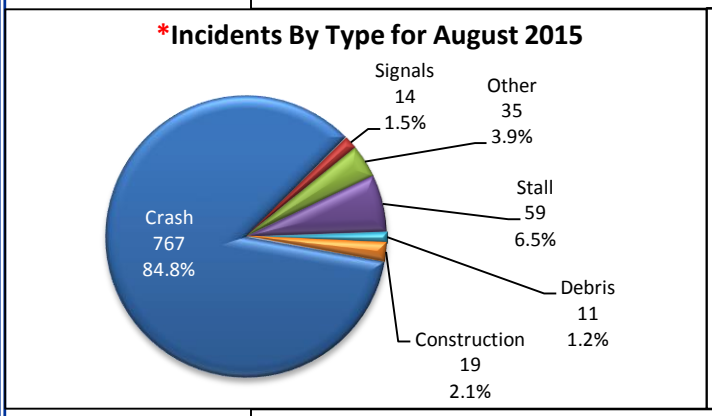
Freeway PTZ Cameras	396
Surface Street PTZ Cameras	492
RWIS & Contracted Weather Cameras	218
Viewable Detection Cameras	41
Total Cameras	1,147
Freeway VMS	100
Surface Street VMS	57
Portable TOC VMS	7
Legacy Trucks Prohibited VMS	21
Variable Speed Limit VMS	15
Chain-Up / Avalanche Warning Signs	24
Total VMS	224
HAR (27 permanent/5 portable)	32
RWIS	100
Ramp Meters	69
TMS	581
Express Lane Plazas	73
Traffic Signals	1,771

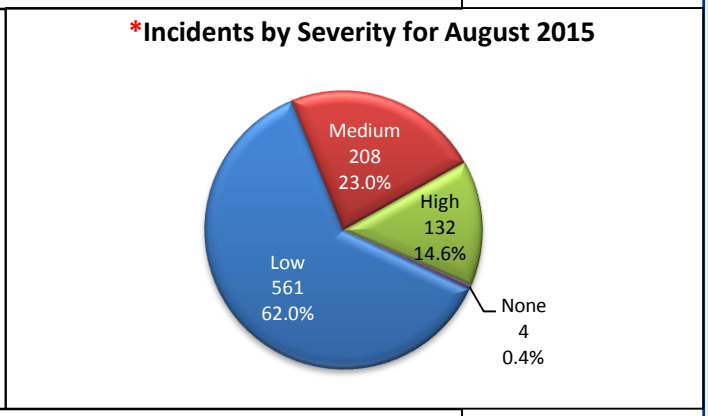
Operations Summary

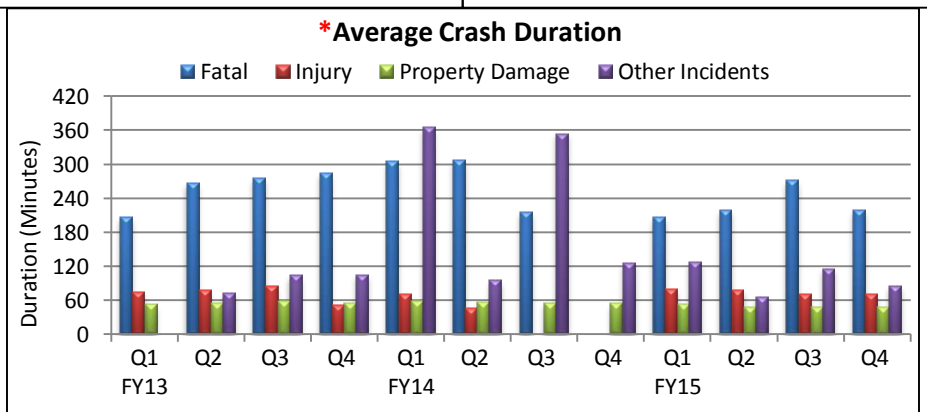
VMS Messages Displayed	84,041
Signal Timing Work Orders	30
Signal Maintenance Work Orders	127
All New Work Orders	379
Work Orders Closed During the Month	375
Incident Responses by the TOC	905
Incident Duration Average Minutes	58
IMT Assists	2,239
Website Visitor Sessions	357,220
511 Calls	26,714
Weather Desk Calls	579
Ask Commuterlink Questions	120
Average Speed AM Peak (07:00-08:00)	65.13
Average Speed PM Peak (17:00-18:00)	57.81
Incidents Using Signal Timing Assistance	171
UDOT Traffic Followers and Re-tweets	515,189
UDOT Traffic App Total Downloads	11,530

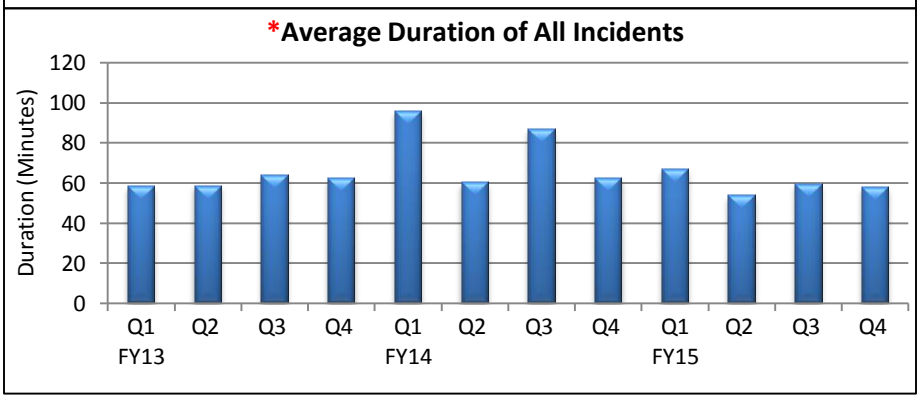
An incident response occurs each time an incident is recorded in the ATMS system. These can be of several types, including crash, construction, debris, stall, congestion, or other. Crashes are separated into three subcategories: property damage, personal injury, and fatal. Each time an incident is created, information is sent to the 511 system, the website, and to the public through email alerts. An incident remains active until it has been completely cleared from the roadway.

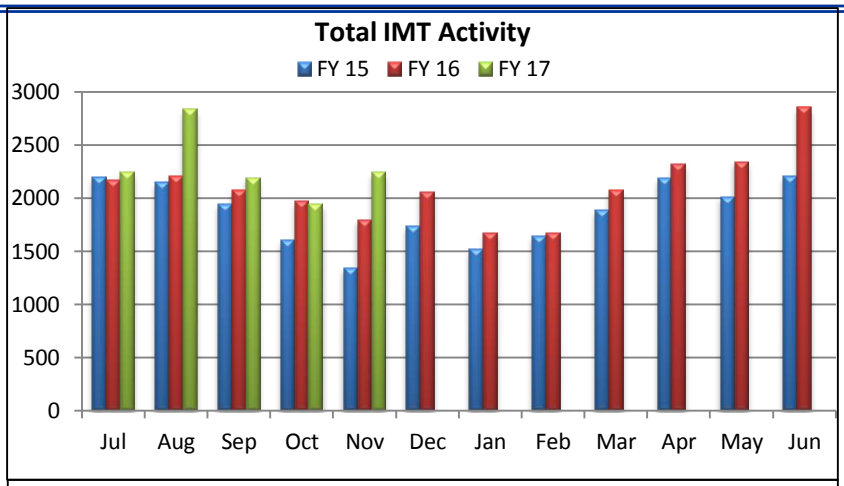


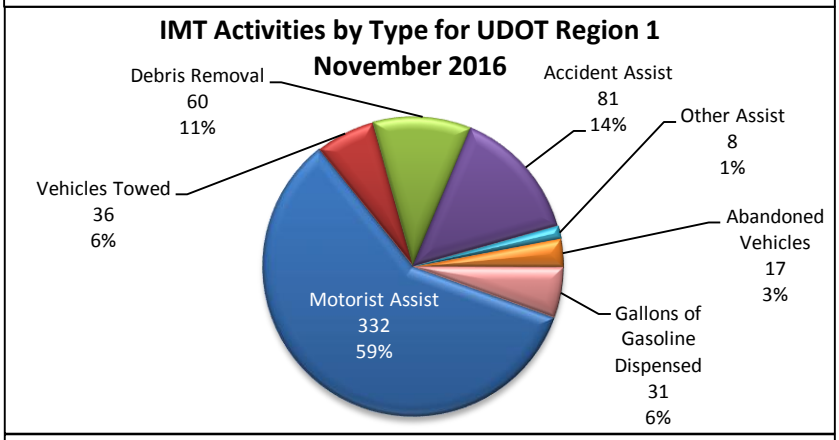


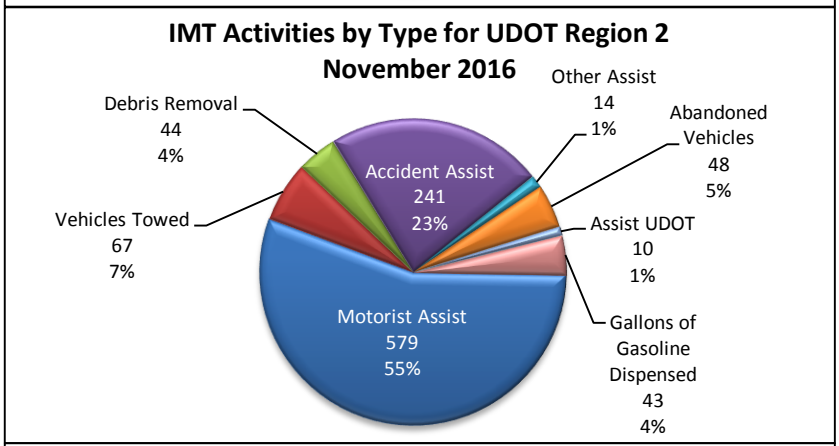


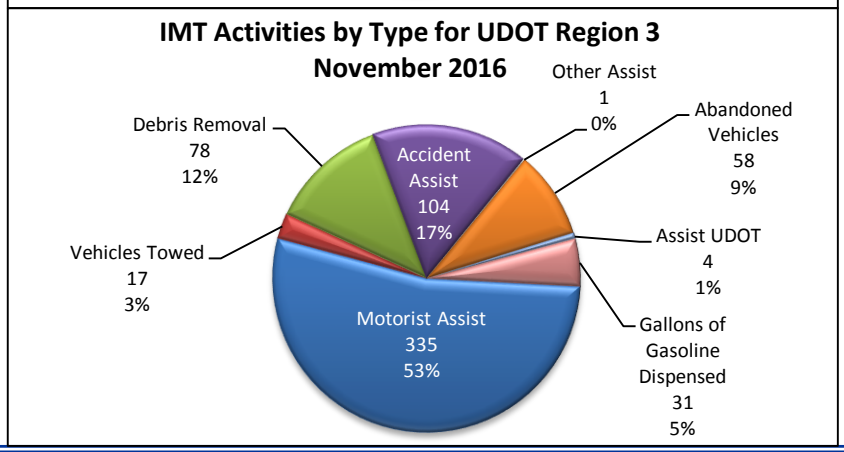





Total IMT Activity
FY 15
FY 16
FY 17
3000
2500
2000
1500
1000
500
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun


IMT Activities by Type for UDOT Region 1
November 2016
Debris Removal
60
11%
Accident Assist
81
14%
Other Assist
8
1%
Vehicles Towed
36
6%
Abandoned
Vehicles
17
3%
Motorist Assist
332
59%
Gallons of
Gasoline
Dispensed
31
6%


IMT Activities by Type for UDOT Region 2
November 2016
Other Assist
14
1%
Debris Removal
44
4%
Abandoned
Vehicles
48
5%
Accident Assist
241
23%
Vehicles Towed
67
7%
Assist UDOT
10
1%
Motorist Assist
579
55%
Gallons of
Gasoline
Dispensed
43
4%


IMT Activities by Type for UDOT Region 3
November 2016
Other Assist
1
0%
Debris Removal
78
12%
Abandoned
Vehicles
58
9%
Accident
Assist
104
17%
Assist UDOT
4
1%
Vehicles Towed
17
3%
Motorist Assist
335
53%
Gallons of
Gasoline
Dispensed
31
5%

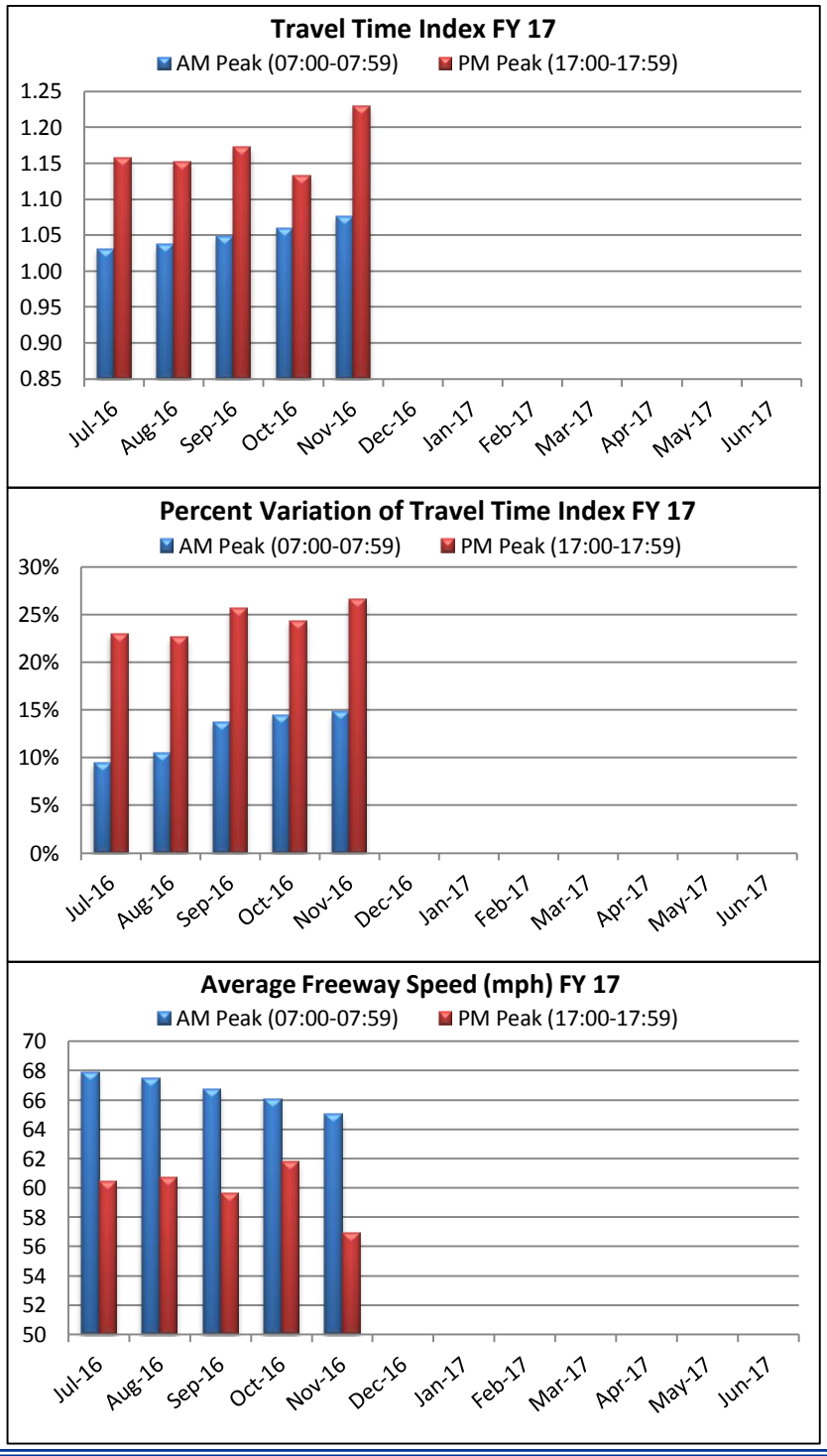
Freeway Traffic Level of Service

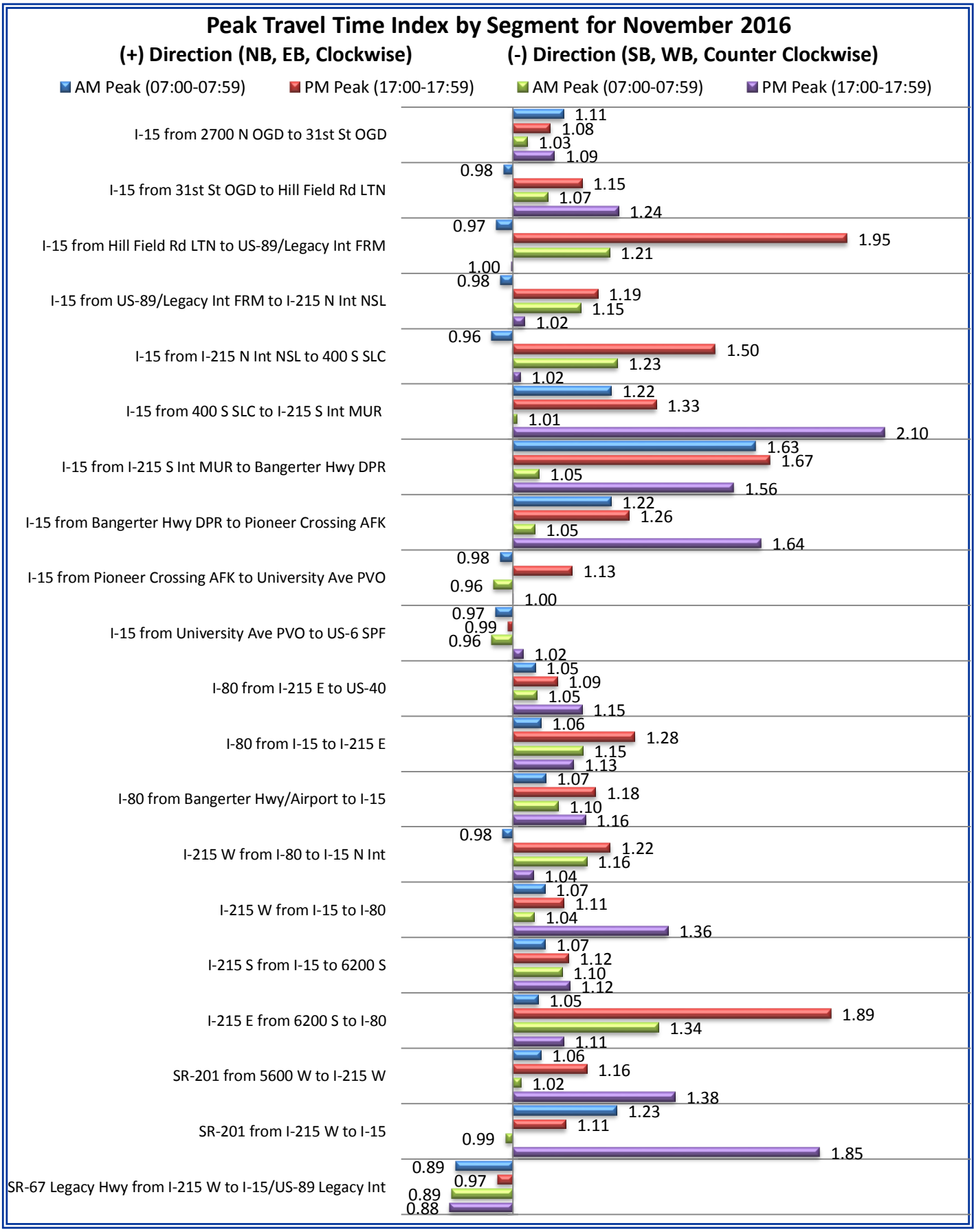
Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Wasatch Front. As more TMS sites are installed throughout the state, they will be included in these performance measures.

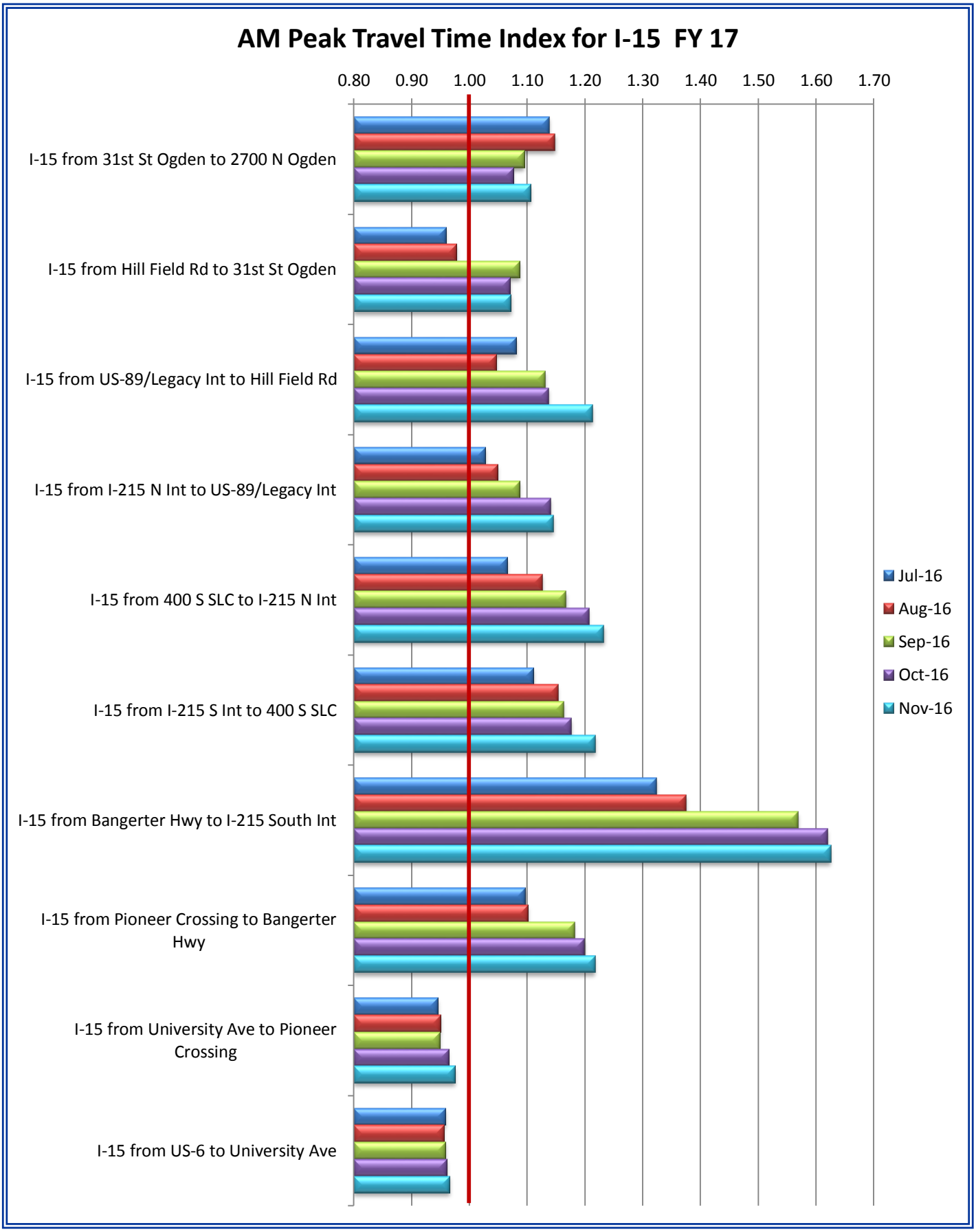
Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of 1.0 represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

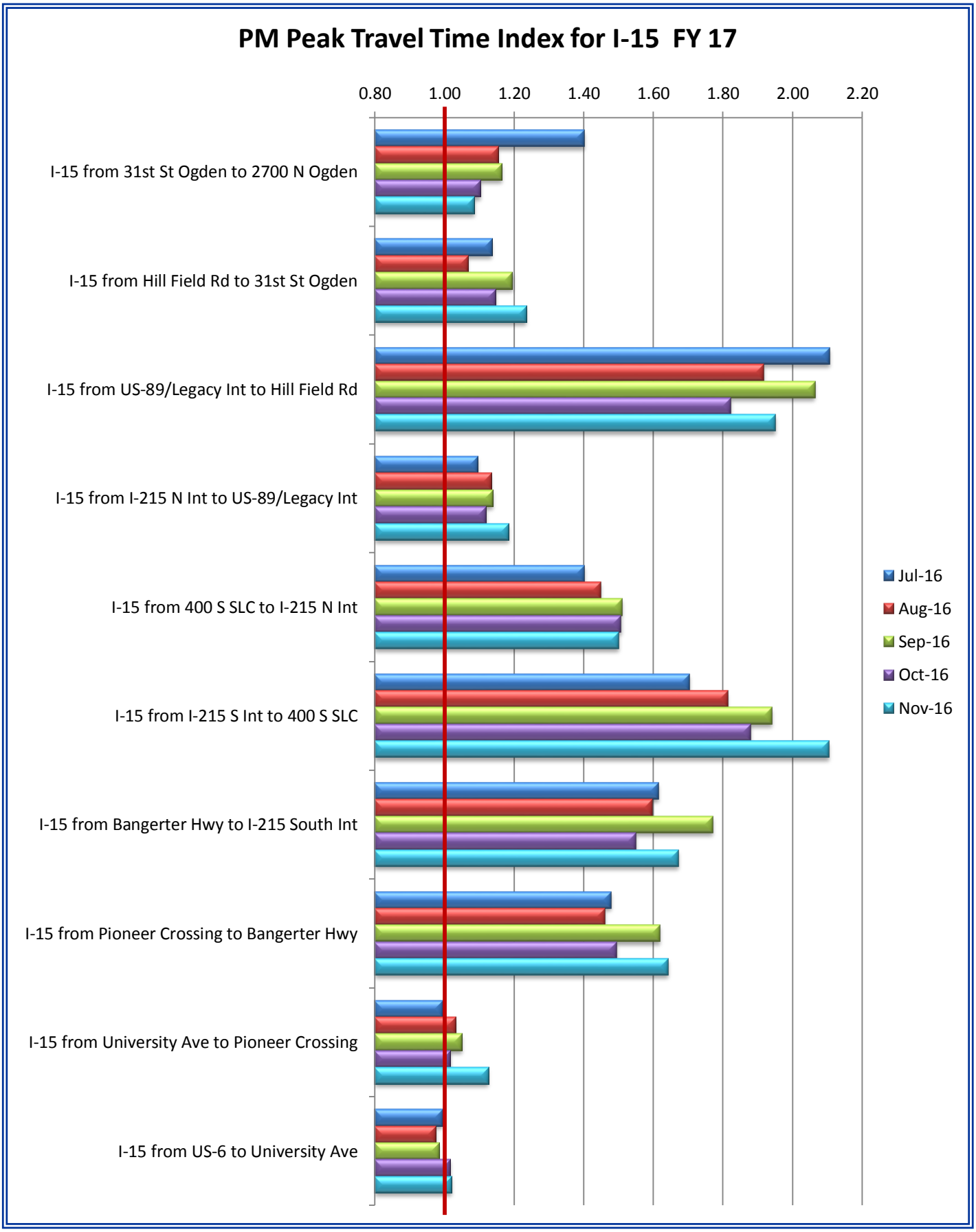
Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time Index changes from day-to-day.

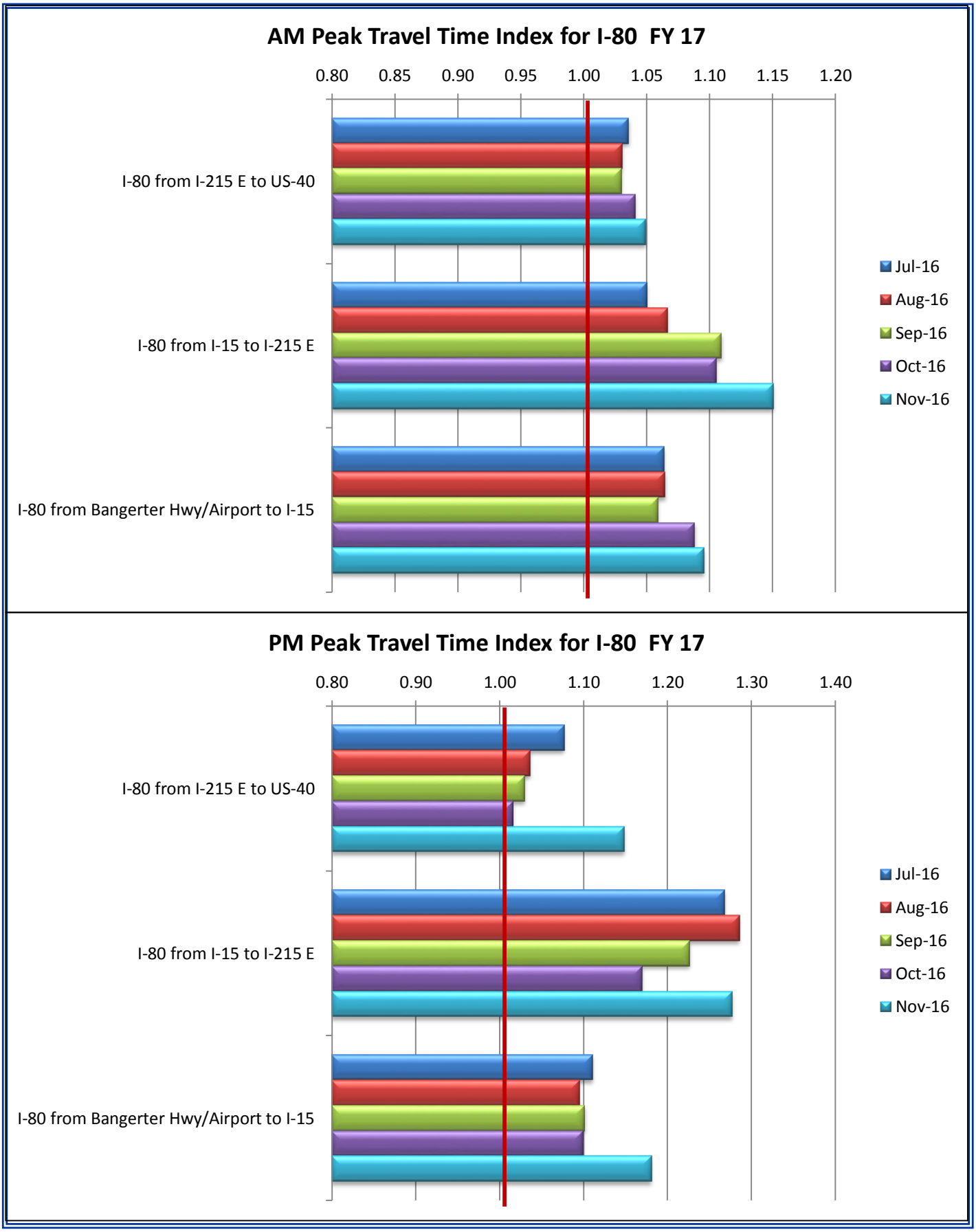
Average Freeway Speed: The freeway speed is weighted by volume.

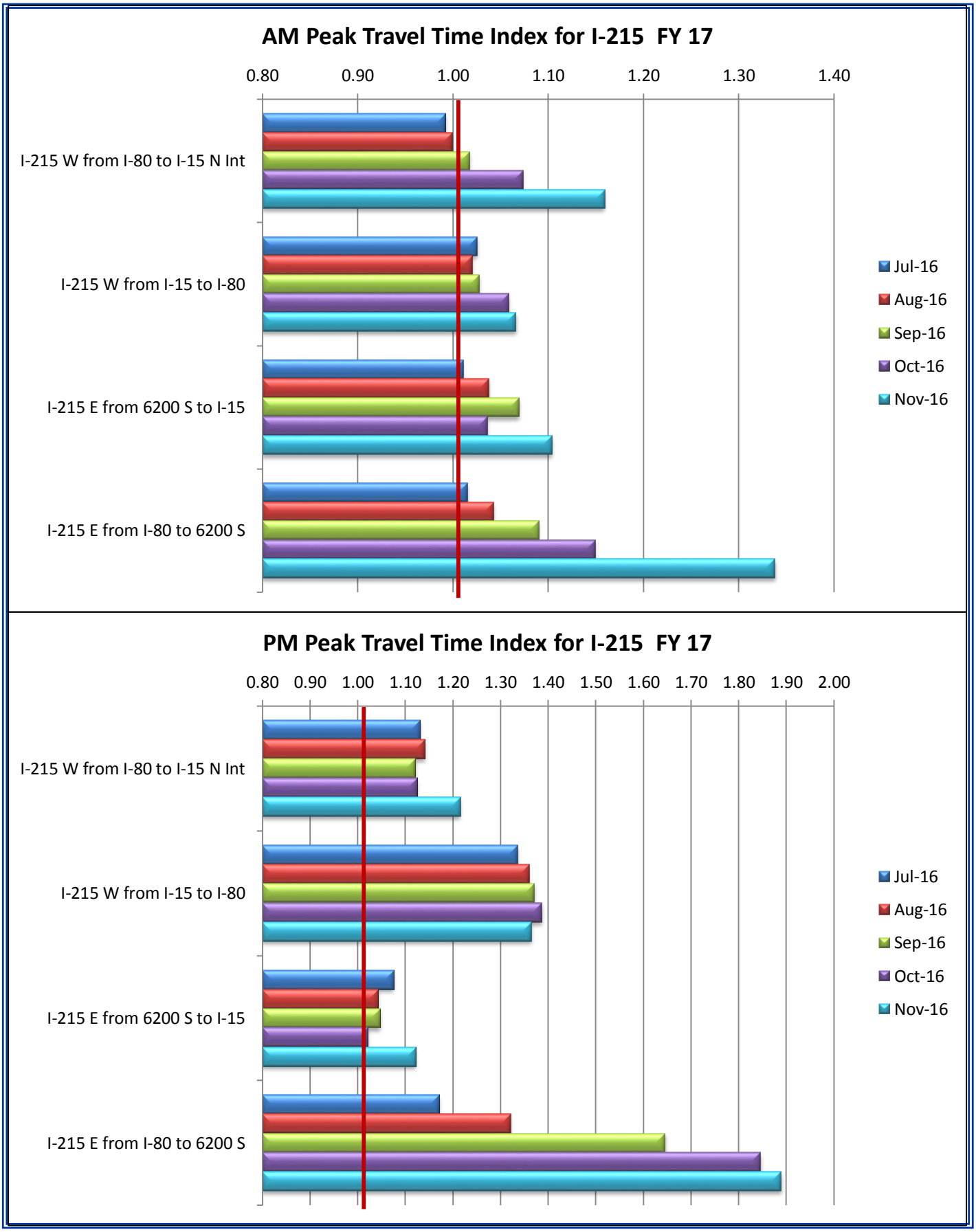


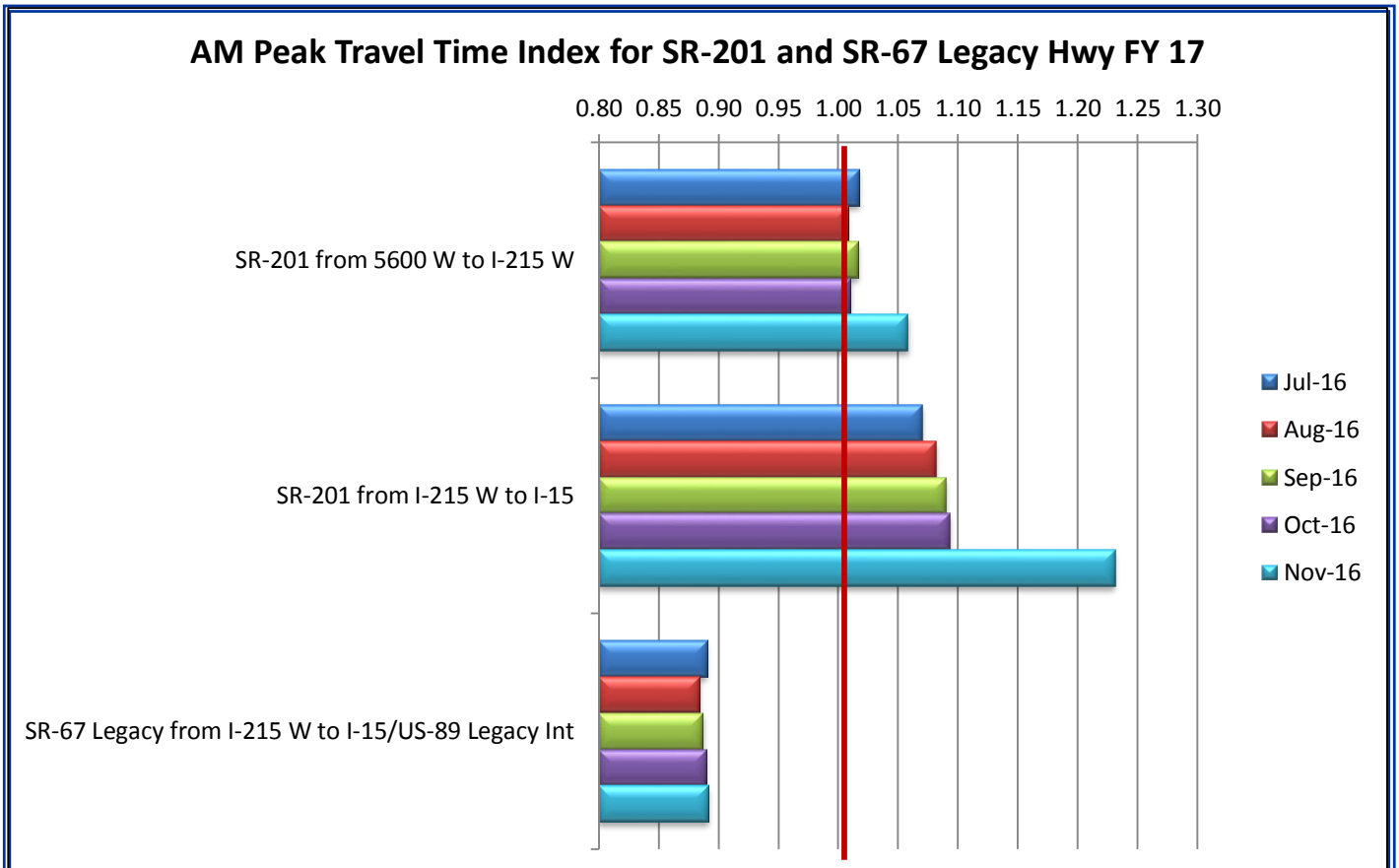

Peak Travel Time Index by Segment for November 2016
(+) Direction (NB, EB, Clockwise)
(-) Direction (SB, WB, Counter Clockwise)
AM Peak (07:00-07:59)
PM Peak (17:00-17:59)
AM Peak (07:00-07:59)
PM Peak (17:00-17:59)
I-15 from 2700 N OGD to 31st St OGD
1.11
1.08
1.03
1.09
I-15 from 31st St OGD to Hill Field Rd LTN
0.98
1.15
1.07
1.24
I-15 from Hill Field Rd LTN to US-89/Legacy Int FRM
0.97
1.95
1.21
1.00
I-15 from US-89/Legacy Int FRM to I-215 N Int NSL
0.98
1.19
1.15
1.02
I-15 from I-215 N Int NSL to 400 S SLC
0.96
1.50
1.23
1.02
I-15 from 400 S SLC to I-215 S Int MUR
1.22
1.33
1.01
2.10
I-15 from I-215 S Int MUR to Bangerter Hwy DPR
1.63
1.67
1.05
1.56
I-15 from Bangerter Hwy DPR to Pioneer Crossing AFK
1.22
1.26
1.05
1.64
I-15 from Pioneer Crossing AFK to University Ave PVO
0.98
1.13
0.96
1.00
I-15 from University Ave PVO to US-6 SPF
0.97
0.99
0.96
1.02
I-80 from I-215 E to US-40
1.05
1.09
1.05
1.15
I-80 from I-15 to I-215 E
1.06
1.28
1.15
1.13
I-80 from Bangerter Hwy/Airport to I-15
1.07
1.18
1.10
1.16
I-215 W from I-80 to I-15 N Int
0.98
1.22
1.16
1.04
I-215 W from I-15 to I-80
1.07
1.11
1.04
1.36
I-215 S from I-15 to 6200 S
1.07
1.12
1.10
1.12
I-215 E from 6200 S to I-80
1.05
1.89
1.34
1.11
SR-201 from 5600 W to I-215 W
1.06
1.16
1.02
1.38
SR-201 from I-215 W to I-15
1.23
1.11
0.99
1.85
SR-67 Legacy Hwy from I-215 W to I-15/US-89 Legacy Int
0.89
0.97
0.89
0.88

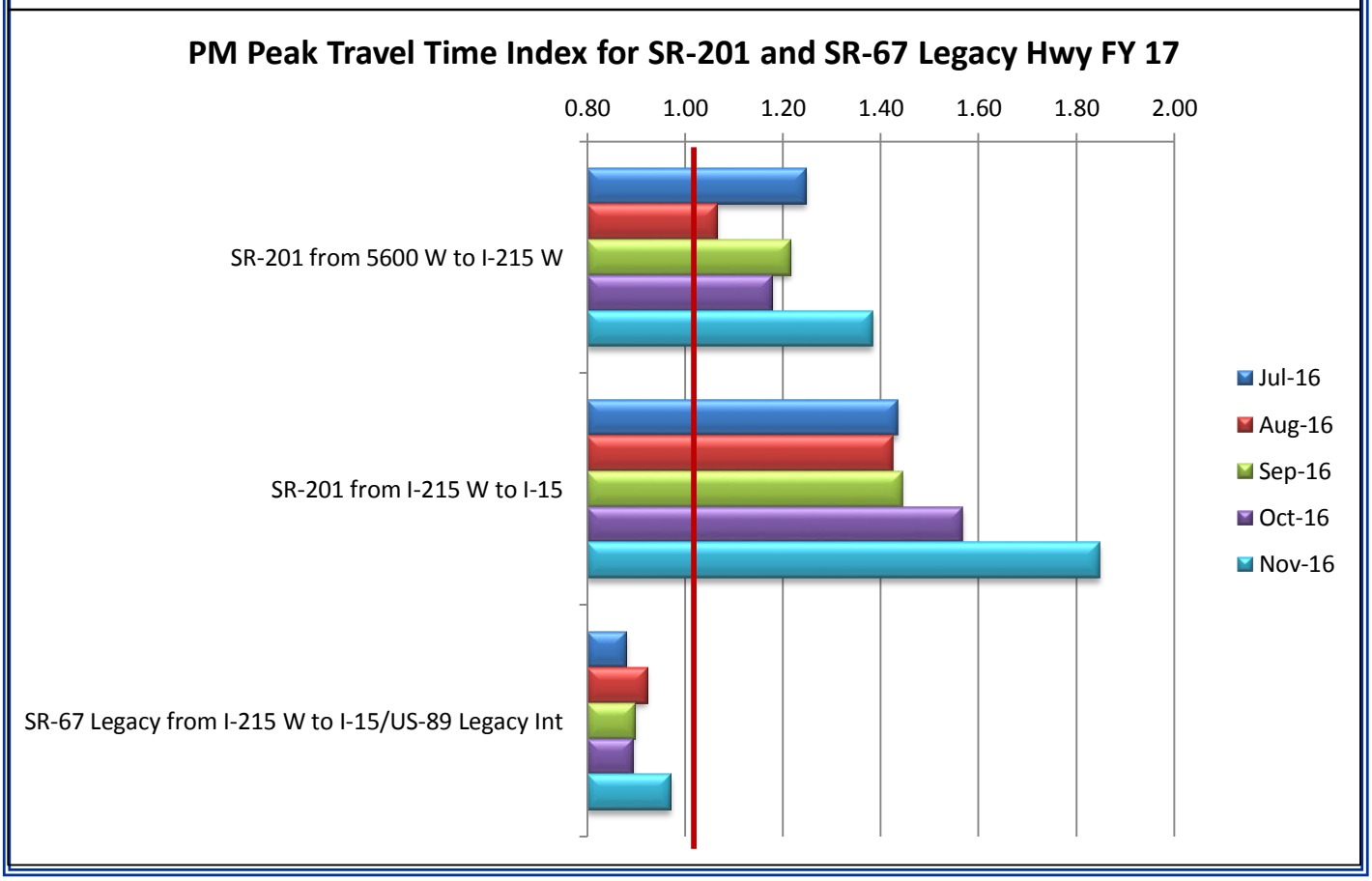

AM Peak Travel Time Index for I-15 FY 17
0.80
0.90
1.00
1.10
1.20
1.30
1.40
1.50
1.60
1.70
I-15 from 31st St Ogden to 2700 N Ogden
I-15 from Hill Field Rd to 31st St Ogden
I-15 from US-89/Legacy Int to Hill Field Rd
I-15 from I-215 N Int to US-89/Legacy Int
I-15 from 400 S SLC to I-215 N Int
I-15 from I-215 S Int to 400 S SLC
I-15 from Bangerter Hwy to I-215 South Int
I-15 from Pioneer Crossing to Bangerter Hwy
I-15 from University Ave to Pioneer Crossing
I-15 from US-6 to University Ave
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16


PM Peak Travel Time Index for I-15 FY 17
0.80
1.00
1.20
1.40
1.60
1.80
2.00
2.20
I-15 from 31st St Ogden to 2700 N Ogden
I-15 from Hill Field Rd to 31st St Ogden
I-15 from US-89/Legacy Int to Hill Field Rd
I-15 from I-215 N Int to US-89/Legacy Int
I-15 from 400 S SLC to I-215 N Int
I-15 from I-215 S Int to 400 S SLC
I-15 from Bangerter Hwy to I-215 South Int
I-15 from Pioneer Crossing to Bangerter Hwy
I-15 from University Ave to Pioneer Crossing
I-15 from US-6 to University Ave
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16

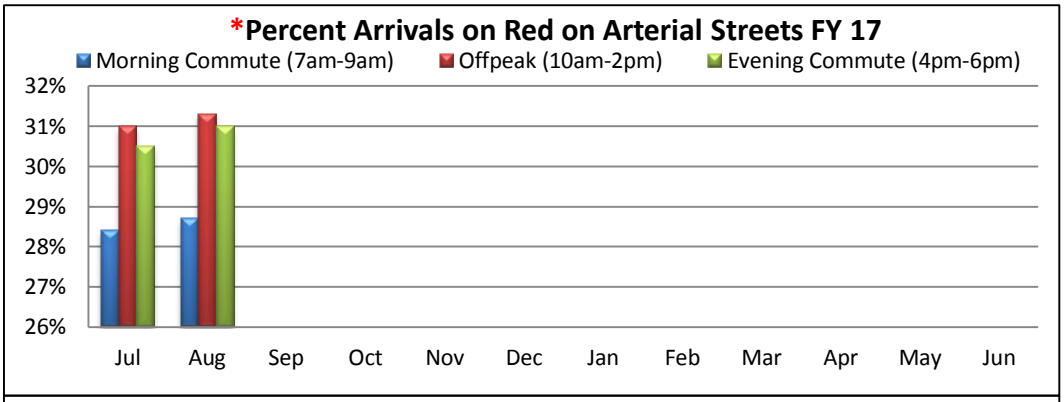

AM Peak Travel Time Index for I-80 FY 17
0.80
0.85
0.90
0.95
1.00
1.05
1.10
1.15
1.20
I-80 from I-215 E to US-40
I-80 from I-15 to I-215 E
I-80 from Bangerter Hwy/Airport to I-15
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16
PM Peak Travel Time Index for I-80 FY 17
0.80
0.90
1.00
1.10
1.20
1.30
1.40
I-80 from I-215 E to US-40
I-80 from I-15 to I-215 E
I-80 from Bangerter Hwy/Airport to I-15
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16

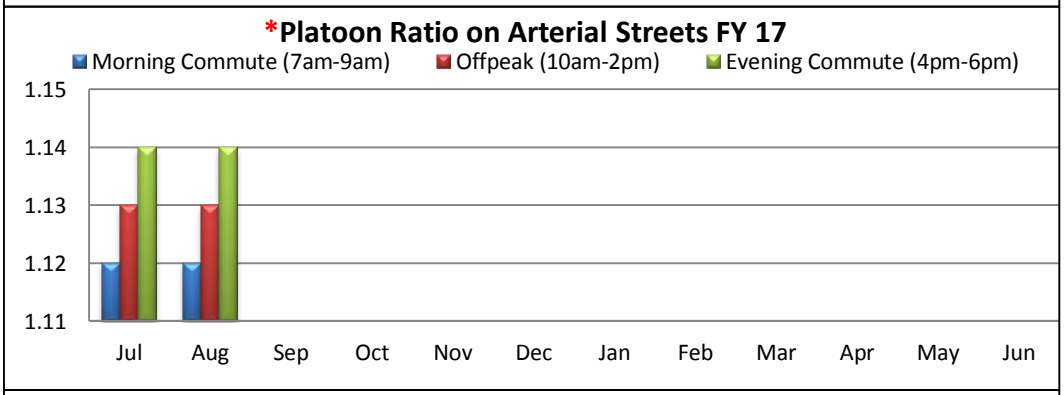

AM Peak Travel Time Index for I-215 FY 17
0.80
0.90
1.00
1.10
1.20
1.30
1.40
I-215 W from I-80 to I-15 N Int
I-215 W from I-15 to I-80
I-215 E from 6200 S to I-15
I-215 E from I-80 to 6200 S
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16
PM Peak Travel Time Index for I-215 FY 17
0.80
0.90
1.00
1.10
1.20
1.30
1.40
1.50
1.60
1.70
1.80
1.90
2.00
I-215 W from I-80 to I-15 N Int
I-215 W from I-15 to I-80
I-215 E from 6200 S to I-15
I-215 E from I-80 to 6200 S
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16

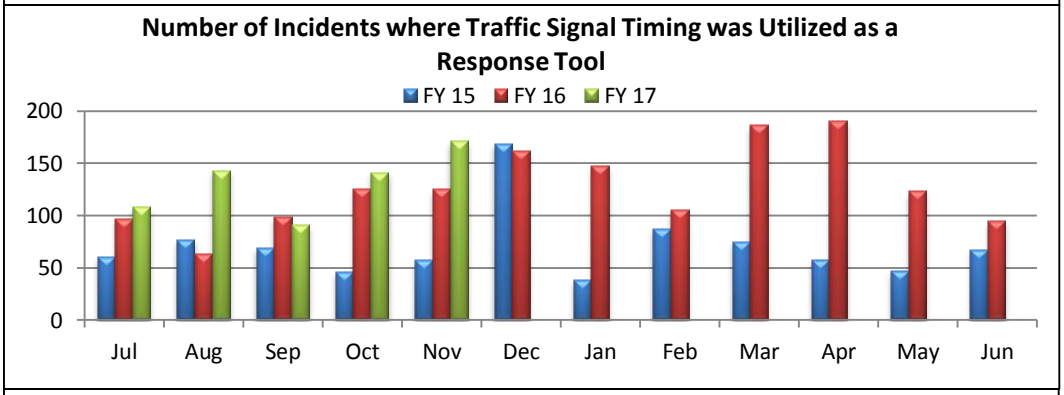

AM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 17
0.80 0.85 0.90 0.95 1.00 1.05 1.10 1.15 1.20 1.25 1.30
SR-201 from 5600 W to I-215 W
SR-201 from I-215 W to I-15
SR-67 Legacy from I-215 W to I-15/US-89 Legacy Int
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16

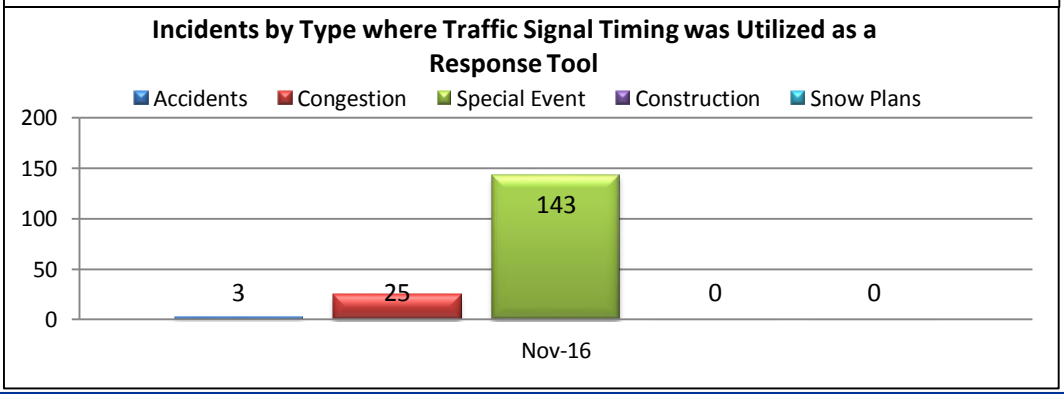

PM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 17
0.80 1.00 1.20 1.40 1.60 1.80 2.00
SR-201 from 5600 W to I-215 W
SR-201 from I-215 W to I-15
SR-67 Legacy from I-215 W to I-15/US-89 Legacy Int
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16

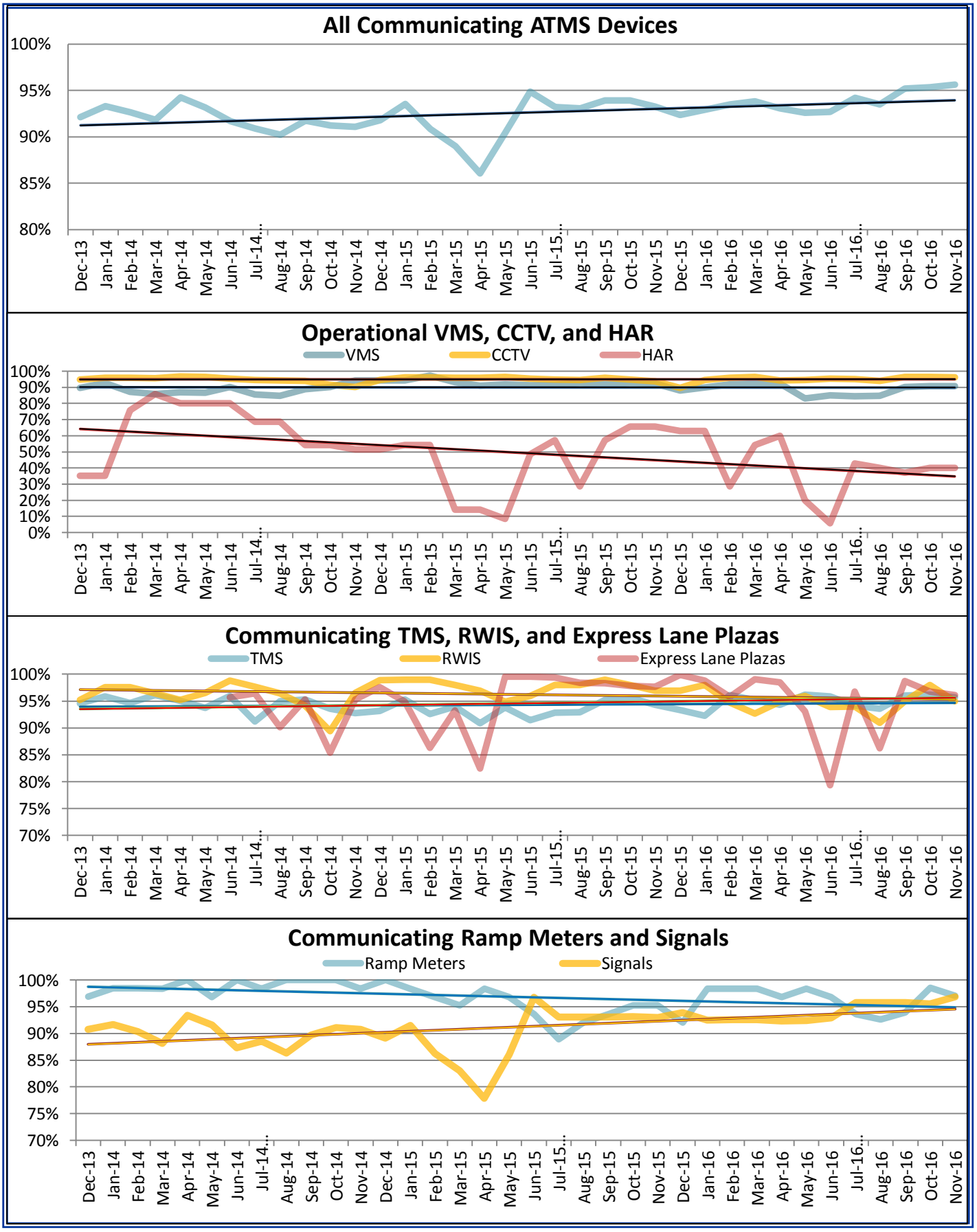
The percent arrival on red along the arterial statistics are generated automatically through the automated traffic signal performance measures, which show real-time and historical functionality at signalized intersections. The system automatically time-stamps when each vehicle arrives at the intersection and then compares the detection time-stamp if the phase was green or red. The percent arrival on red data is averaged over the 24 hours of the day and days in the month. . The lower charts shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help relieve excessive congestion.

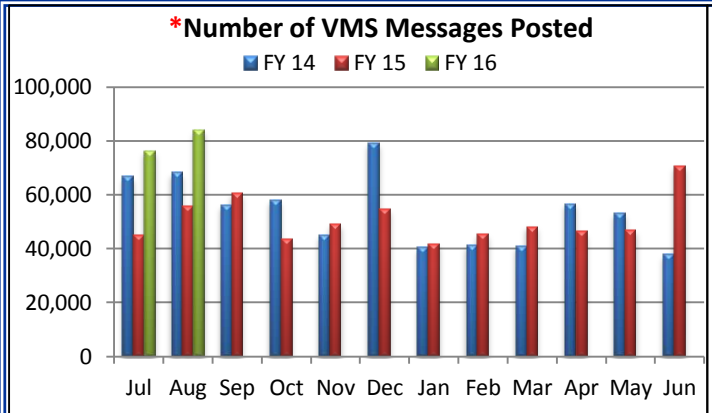


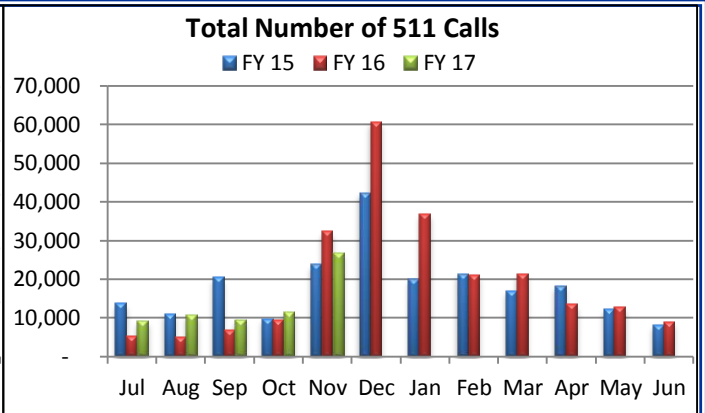


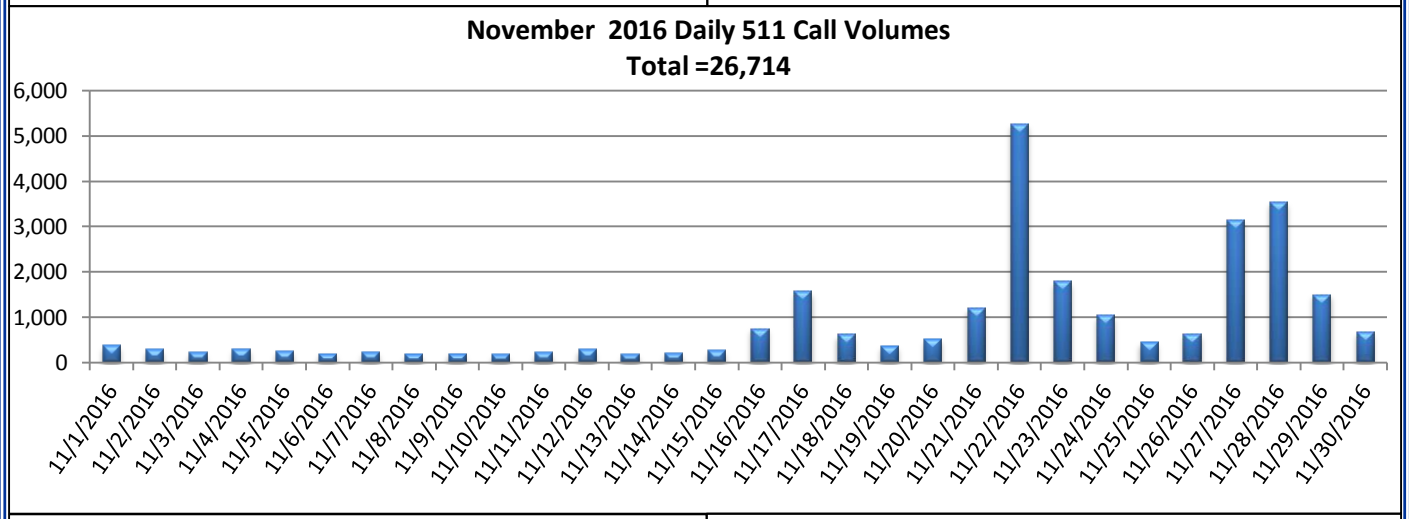





All Communicating ATMS Devices
100%
95%
90%
85%
80%
Dec-13 Jan-14 Feb-14 Mar-14 Apr-14 May-14 Jun-14 Jul-14... Aug-14 Sep-14 Oct-14 Nov-14 Dec-14 Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15... Aug-15 Sep-15 Oct-15 Nov-15 Dec-15 Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16... Aug-16 Sep-16 Oct-16 Nov-16
Operational VMS, CCTV, and HAR
VMS
CCTV
HAR
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Dec-13 Jan-14 Feb-14 Mar-14 Apr-14 May-14 Jun-14 Jul-14... Aug-14 Sep-14 Oct-14 Nov-14 Dec-14 Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15... Aug-15 Sep-15 Oct-15 Nov-15 Dec-15 Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16... Aug-16 Sep-16 Oct-16 Nov-16
Communicating TMS, RWIS, and Express Lane Plazas
TMS
RWIS
Express Lane Plazas
100%
95%
90%
85%
80%
75%
70%
Dec-13 Jan-14 Feb-14 Mar-14 Apr-14 May-14 Jun-14 Jul-14... Aug-14 Sep-14 Oct-14 Nov-14 Dec-14 Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15... Aug-15 Sep-15 Oct-15 Nov-15 Dec-15 Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16... Aug-16 Sep-16 Oct-16 Nov-16
Communicating Ramp Meters and Signals
Ramp Meters
Signals
100%
95%
90%
85%
80%
75%
70%
Dec-13 Jan-14 Feb-14 Mar-14 Apr-14 May-14 Jun-14 Jul-14... Aug-14 Sep-14 Oct-14 Nov-14 Dec-14 Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15... Aug-15 Sep-15 Oct-15 Nov-15 Dec-15 Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16... Aug-16 Sep-16 Oct-16 Nov-16


*Number of VMS Messages Posted
FY 14
FY 15
FY 16
100,000
80,000
60,000
40,000
20,000
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun


Total Number of 511 Calls
FY 15
FY 16
FY 17
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun


November 2016 Daily 511 Call Volumes
Total =26,714
6,000
5,000
4,000
3,000
2,000
1,000
0
11/1/2016
11/2/2016
11/3/2016
11/4/2016
11/5/2016
11/6/2016
11/7/2016
11/8/2016
11/9/2016
11/10/2016
11/11/2016
11/12/2016
11/13/2016
11/14/2016
11/15/2016
11/16/2016
11/17/2016
11/18/2016
11/19/2016
11/20/2016
11/21/2016
11/22/2016
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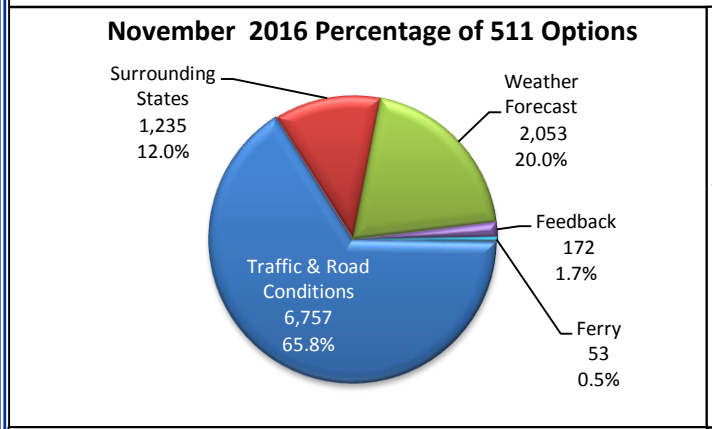
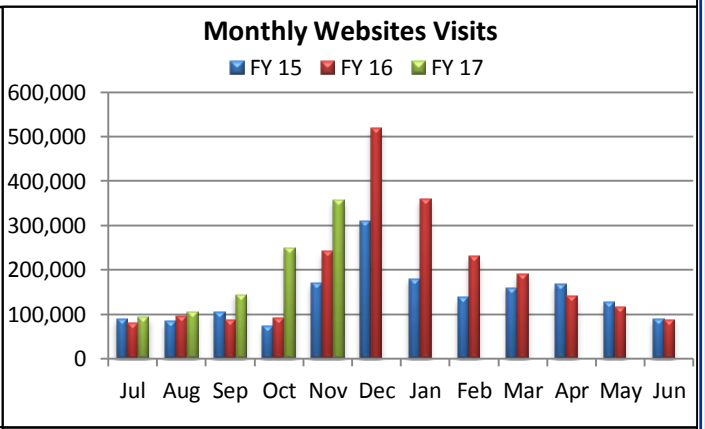
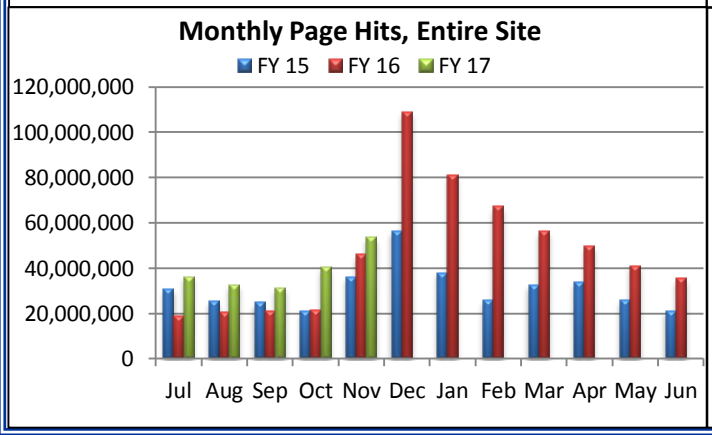
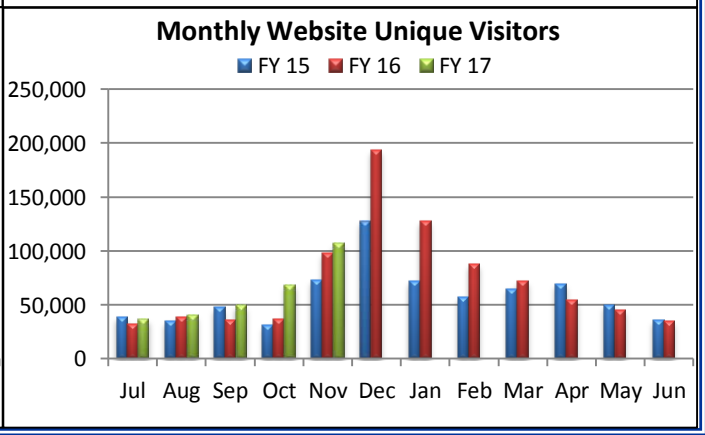
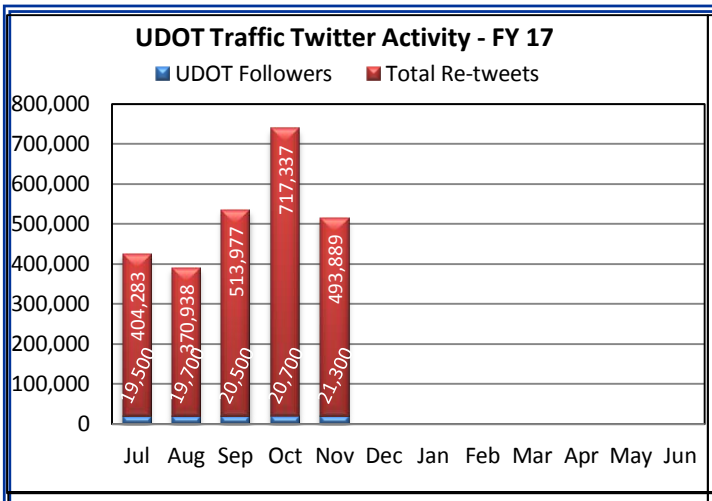
11/27/2016
11/28/2016
11/29/2016
11/30/2016

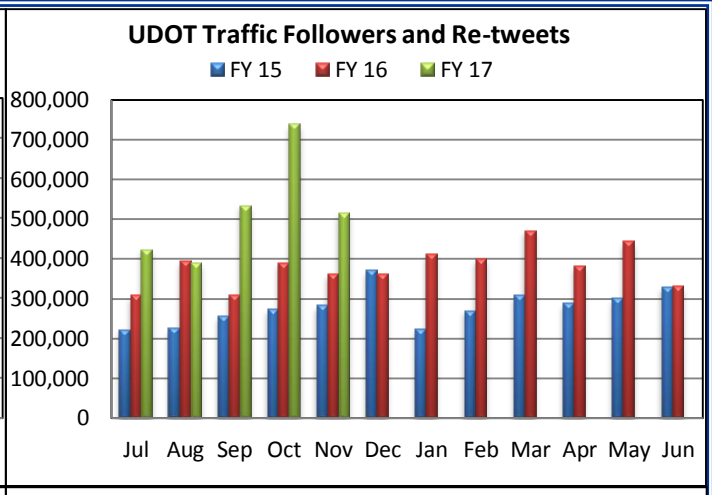

November 2016 Percentage of 511 Options
Surrounding States 1,235 12.0%
Weather Forecast 2,053 20.0%
Feedback 172 1.7%
Ferry 53 0.5%
Traffic & Road Conditions 6,757 65.8%

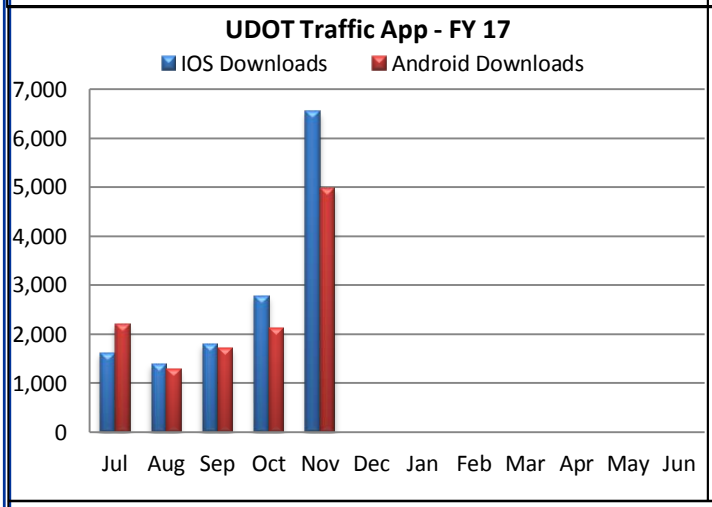

Monthly Websites Visits
FY 15
FY 16
FY 17
600,000
500,000
400,000
300,000
200,000
100,000
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun

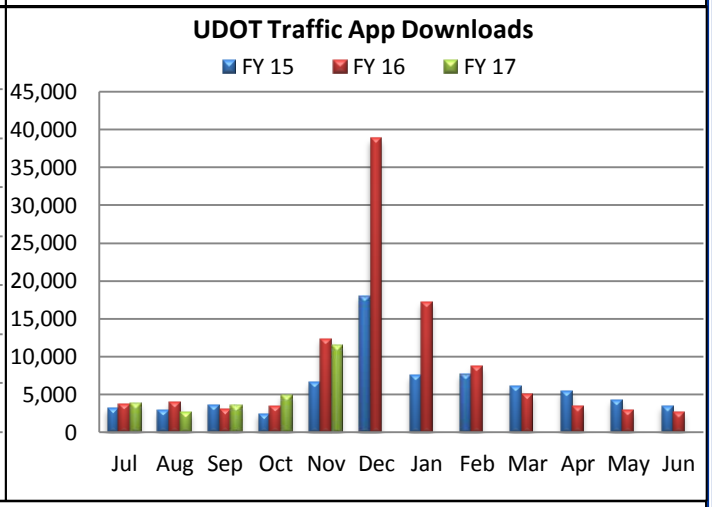

Monthly Page Hits, Entire Site
FY 15
FY 16
FY 17
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun

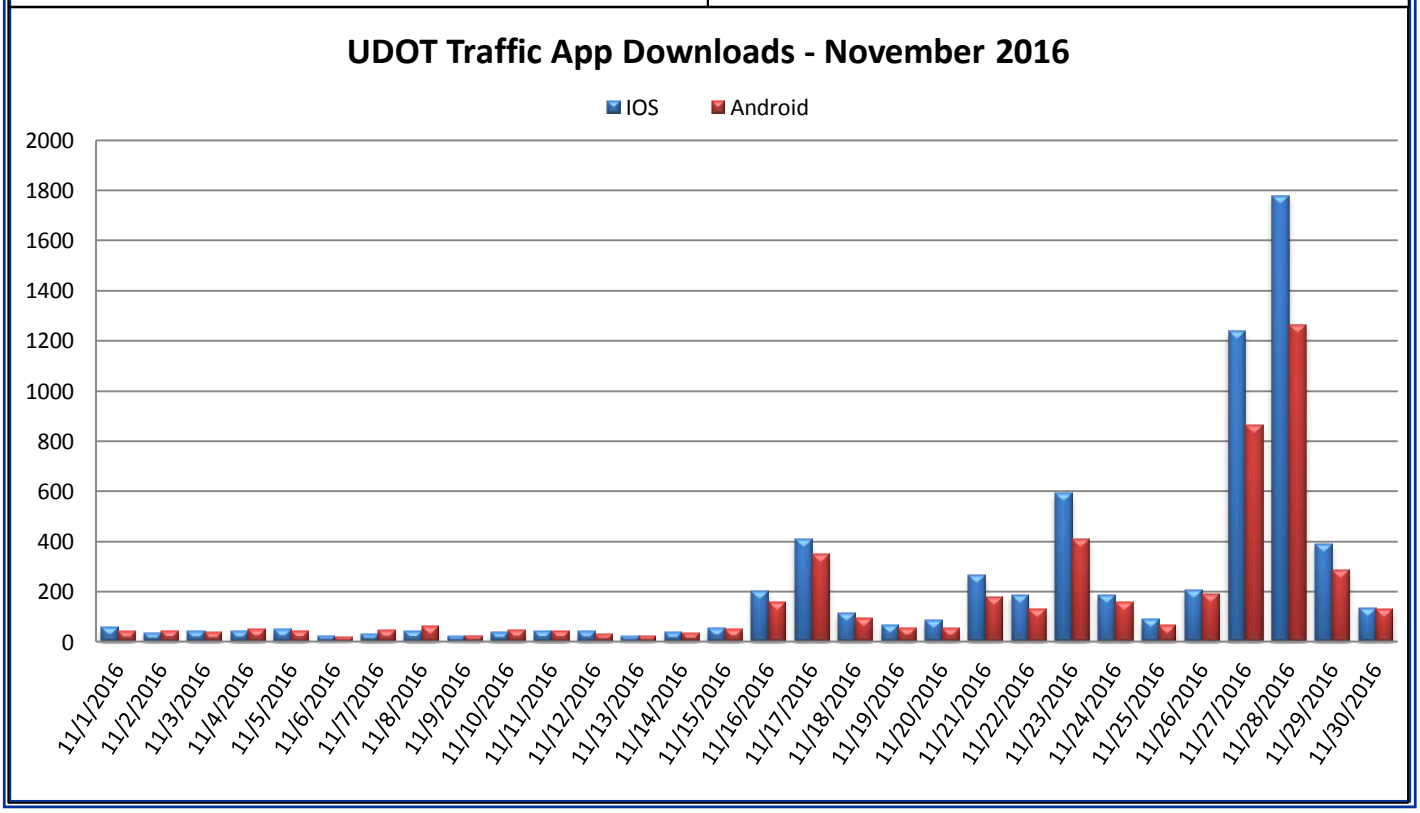

Monthly Website Unique Visitors
FY 15
FY 16
FY 17
250,000
200,000
150,000
100,000
50,000
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun


UDOT Traffic Twitter Activity - FY 17
UDOT Followers
Total Re-tweets
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
404,283
370,938
513,977
717,337
493,889
19,500
19,700
20,500
20,700
21,300
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun


UDOT Traffic Followers and Re-tweets
FY 15
FY 16
FY 17
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun


UDOT Traffic App - FY 17
IOS Downloads
Android Downloads
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun


UDOT Traffic App Downloads
FY 15
FY 16
FY 17
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun


UDOT Traffic App Downloads - November 2016
IOS
Android
2000
1800
1600
1400
1200
1000
800
600
400
200
0
11/1/2016
11/2/2016
11/3/2016
11/4/2016
11/5/2016
11/6/2016
11/7/2016
11/8/2016
11/9/2016
11/10/2016
11/11/2016
11/12/2016
11/13/2016
11/14/2016
11/15/2016
11/16/2016
11/17/2016
11/18/2016
11/19/2016
11/20/2016
11/21/2016
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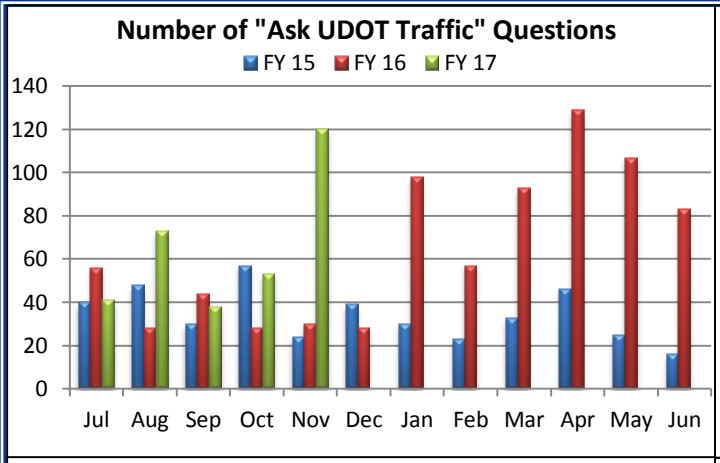
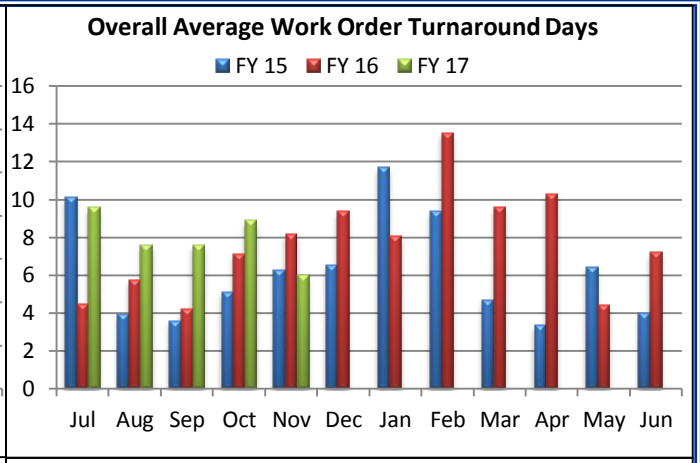
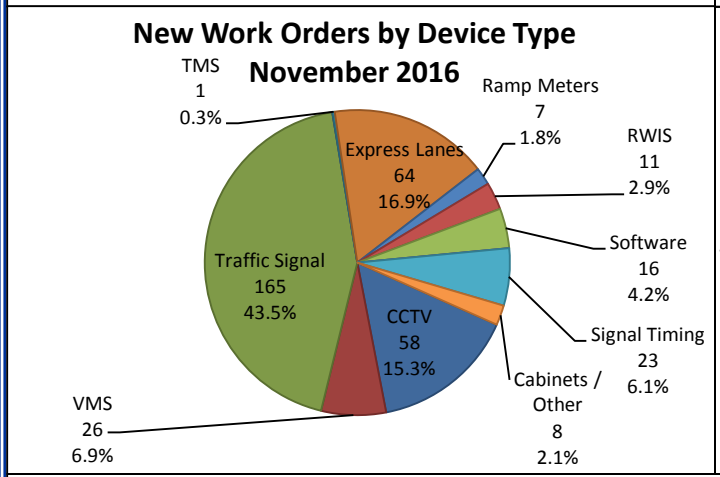
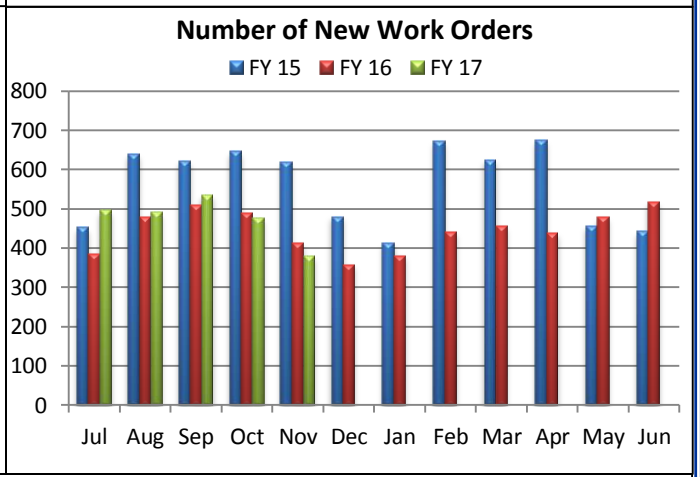
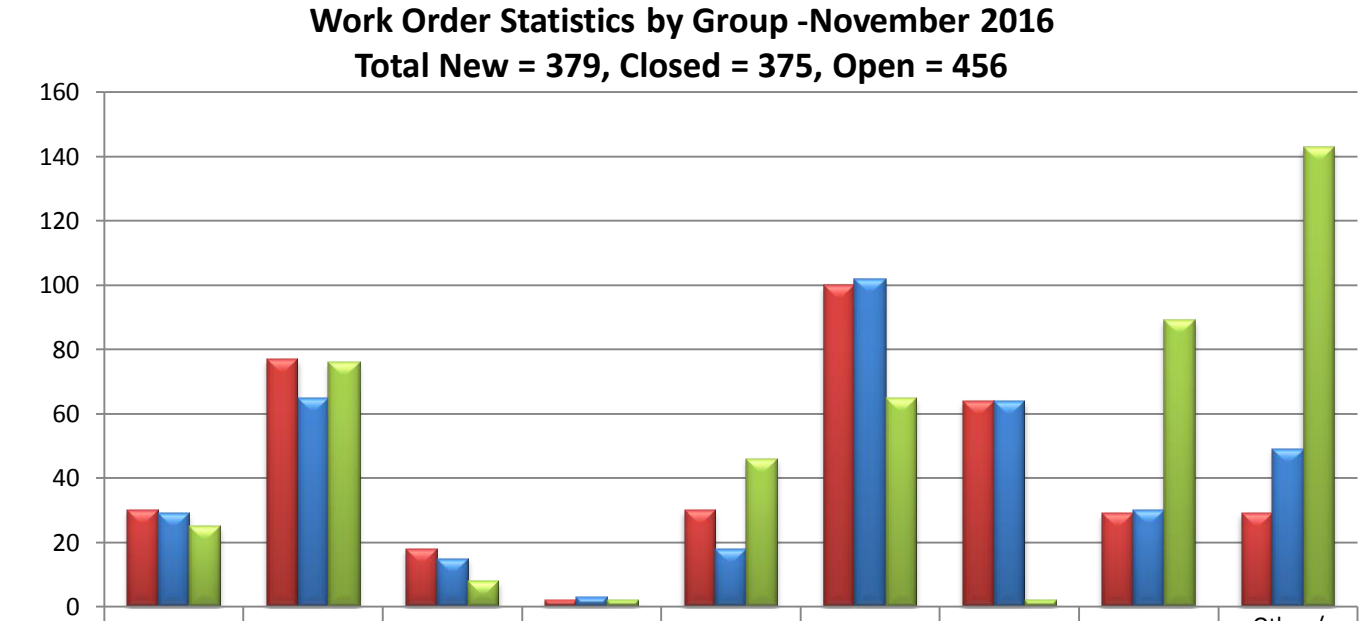
11/27/2016
11/28/2016
11/29/2016
11/30/2016











	R1 Signal Maintenance	R2 Signal Maintenance	R3 Signal Maintenance	R4 Signal Maintenance	Signal Timing	ATMS	Express Lanes	ISS	Other / Engineering / Contractor
New	30	77	18	2	30	100	64	29	29
Closed	29	65	15	3	18	102	64	30	49
Open	25	76	8	2	46	65	2	89	143

CONTROL ROOM

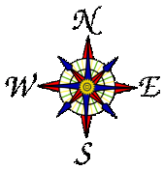
The Control Room Manager attended the FHWA EDC Conference in Sacramento CA. The Control Room now has a full complement of operators for the Winter Season by hiring Jesse Motzkus for Shift II.

Welcome to UDOT Jesse

The Control Room supported West Valley City Police Officer Cody Brotherson's funeral and procession by providing pre-event messaging and traffic management, utilizing VMS, social media alerts and signal timing plans unique to the event.

TRAVELER INFORMATION

The Traveler Information Team presented at the UDOT Conference regarding the history of the TOC, hosted a tour for BYU Idaho engineering students and attended/presented during an engineer visit from New Zealand. The Team also assisted with UDOT's annual "Snow Show" media event, and represented UDOT in the special event command post at the University of Utah. Coordinated traffic management and traveler information for two law enforcement officer funerals, Maverick Center special events, and led discussions for a new recently deployed weather/traveler information product.



WEATHER INFORMATION GROUP

The Weather Group had 489 overall UDOT weather interactions,133 outgoing weather alerts, nine National Weather Service collaborations and 13 road weather alerts.

Climatology

Most of the contiguous U.S., except for the east coast, experienced above normal temperatures for the month of November. The second half of the month eventually got cooler for the state, but Salt Lake International Airport was seven degrees above average, making it the warmest November on record. Additionally, it was the warmest meteorological fall (September-November) on record at the airport and experienced the longest freeze-free period ever (242 days, March 19 - November 17). Compared to average precipitation, Utah was mixed (various areas were wetter than normal, others were drier). The airport was 0.31" above normal for precipitation. The first inch of snow fell at the TOC on November 23rd.

Weather Operations

The Weather Group presented the Snow and Ice Performance Measure at the UDOT Conference and provided training for the new Storm Management web-based tool to Region 1 and 2 employees.

The National Weather Service (Salt Lake City) and the UDOT Weather group hosted a media workshop, discussing collaboration strategies between UDOT, the National Weather Service, and local media meteorologists.

Jeff Williams presented the Pathfinder Initiative on behalf of the FHWA's Every Day Counts (EDC-4) Weather Savvy Roads initiative in Portland, OR. The Pathfinder Initiative is based on UDOT/National Weather Service collaborative efforts. Paul Pisano, team leader of Road Weather Management for the FHWA, gave the following feedback after the meeting:

"…7 of the 7 states said they're interested in Weather-Savvy Roads[.] We hit a home run!"

UDOT Communications and the UDOT Weather Group rolled out a new Weather Brief video for the November valley snow storms, announcing primary storm travel impacts. These videos are expected to continue for high impact weather events.

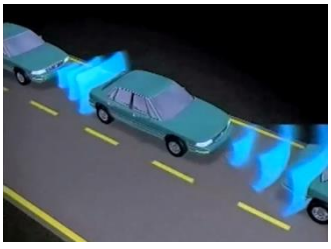
The TOC Weather Operations group participated in three tours for a group attending the UDOT conference. Parsons Brinkerhoff employees, and University of Utah Atmospheric Science students with Professor John Horel.

TRAFFIC OPERATIONS AND REPORTING

- Participated in the UDOT Conference.
- Big data procurement for the Cottonwood Canyons.
- Big data procurement Statewide.
- Lehi Technology Corridor.
- I-80/Foothill Boulevard interchange study.
- Life on State St Study.
- Shared operational experiences with Auxland Transport, New Zealand.
- MP 8 & 10 operational analysis.
- Freeway merging analysis for Region 4.
- Redwood Road/I-215 north end DDI interchange design.
- NCHRP panel 09-113b panel discussion.
- Region 3 support.
- 5400 South 4000 West to Bangerter Hwy operational analysis.
- Congestion Reporting.
- Pleasant Grove Boulevard interchange analysis.
- Mountain Accord support.
- US-6 study in Spanish Fork.
- The Wasatch Front Regional Council Travel Demand Management Workshop.

ITS ASSET MANAGEMENT

- Integrated two TMS, four surface street CCTVs, and seven signals.



ATMS Teams

Field Team

The team performed a CCTV LFOT inspection at 1100 North County Blvd in Highland. Communication interference problems for channel 1902 was resolved by upgrading the Redline radios from 5.8 MHz to 3.3 MHz. The radios were reconditioned and uploaded with the new firmware. This has fixed the problem and has saved UDOT the need of purchasing new radios.

We have been working directly with Teleste on a communication problem we are having with their encoders. Six different encoders, having the same problem, have been returned to Teleste. It was determined that the problem is with the data port. Teleste will come up with a solution to resolve the this issue. Total work orders closed for the month of November is 98

Electronics Lab Team

Including Digi terminal servers, traffic signal controllers, 2070 controllers, wireless radio, Wavetronix radar and CCTVs, a total of 55 devices were tested/repaired. The Lab Team released one traffic signal cabinet to KV Electric for 3030 W @ 3500 S, and one to Cache Valley Electric for SR-112 & Industrial Loop Road. An LFOT was performed for a non-intrusive detector at I-215 S EB/300 E which replaced loops that were damaged by a project. ATMS cabinets were retrieved from the Point Project and all the good ATMS devices were salvaged. A meter base was replaced at US-189 MM 11.5 and the Lab Team assisted the Express Lanes Team with a laser reboot at I-15 NB / Bangerter. There are 21 open work orders. 15 of which are on hold for loop replacements. The Electronics Lab closed three work orders during the month of October.

Express Lanes Team

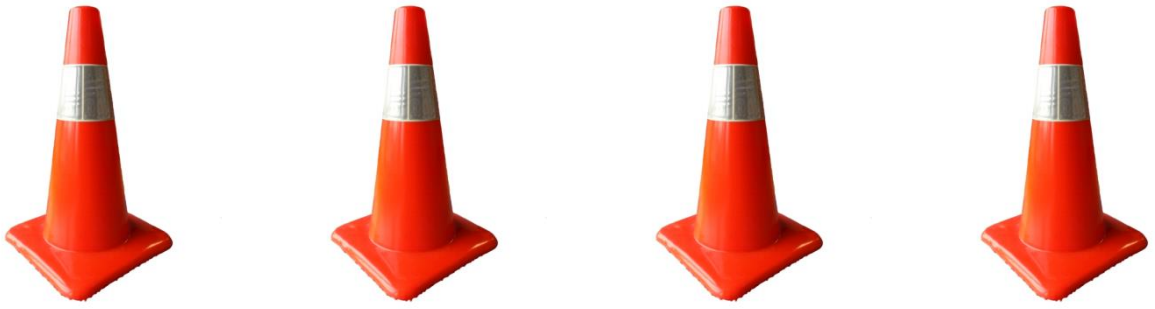
The Express Lane Team closed 319 work orders, and performed its weekly system drive. The team repaired and programmed 20 lane controllers, replaced 12 lane controllers, one reader, and two lasers. The team rebooted 11 lane controllers, two lasers, three readers and four VTMS. The team recalibrated four pucks and performed PMs on 12 cabinets, and eight lane PMs were performed. The team also installed two Ethernet relays and performed the OFIT test for the point project. The Lab Group and the Field Group assisted when extra manpower was needed and the Express Lanes Group assisted the Lab Group when they needed extra man power also.

Region 1

- **Statewide Signal Interconnect:** PS&E has taken place. Advertisement is eminent.
- **US-60 and 2700E:** In design.
- **30th Street and Harrison:** Under construction.
- **650 N. I-15 Clearfield:** Under construction, integration in process.
- **I-15 SR-30 to the Idaho State line:** This project may be part of a partnership with a Telecom.
- **Sardine Canyon US-89 from Brigham to Wellsville:** In design.
- **I-15. Farr West to Brigham:** Traffic Monitoring Station (TMS) improvements and VMS installation. Under construction.
- **I-15 and Pioneer Ramp (13216) Narwhal:** Under construction.
- **SR-193 1550 West (13949):** Under construction.
- **Clearfield 650 N. I-15 (11092) Narwhal:** Under construction.

Region 2

- **Salt Lake Valley Traffic Signal Interconnect:** UDOT is stepping up new efforts to support Little Cottonwood Canyon traffic management. Region 2 added three traffic Cameras along Wasatch Blvd, and SR-210. These cameras will help see traffic backing at the canyon entrance and help adjust signal timing to move traffic during in-load and out-load periods.



Region 3

- **US-40 CCTV/Signal connections (12805):** STRATA installed connection electronics to eight signals and four CCTV's in the basin area. 30 day burn-in started.
- **US-189; State Park to Rock Cut passing Lanes (11415):** Project under construction. Power connections scheduled for December 6. ATMS inspection to follow.
- **Provo; SR-256; 800 East to Univ Ave BRT (10266):** ATMS design of micro fiber and two CCTV's ongoing. Project under construction. Ordered CCTV lowering poles for the two locations on SR-265 between 800 West and 550 West.
- **Spanish Fork; Canyon Rd @ 2550 E Signal (10960):** Project under construction. Wireless radio system installed. Identified antennas needing replacement, placed order. ATMS inspection expected in December.
- **Provo; US-89 (300 S); 100 East to 700 East (10137):** Project under construction. Delivered state furnished materials.
- **Utah County Signal Interconnect (13244):** Project under construction. Delivered state furnished materials.
- **I-15 Fiber; Payson to Santaquin (14149):** Held plan-in-hand meeting. Determined we will connect to CentraCom hub as well as new SR-6 @ 200 West Santaquin and 100 North Main St Nephi signal. Will solicit additional funding from MAG and TOC ITS funds.
- **Pleasant Grove: US-89 @ 200/220 South (14683):** 30 day burn-in started.
- **American Fork; US-89 @ Main St./200 East (13061):** Held PS&E.
- **Payson; 1400 South State St (SR-198) Signal/CCTV (14573):** In advertisement.
- **Highland; SR-129 @ 1100 North Signal/CCTV (14955):** 30 day burn-in started.
- **Saratoga Springs; SR-68 Saratoga Springs to Stillwater Parkway (10689):** Project in design. New fiber/conduit/signal connections.
- **Orem; SR-114 (Geneva) @ 800 South Signal/CCTV (14956):** Comment resolution.
- **Santaquin; US-6 @ 200 West Signal (14954):** Project under construction.
- **Provo; US-89 @ 1860 South Signal/CCTV upgrade (14115):** Project under construction.
- **Orem; Lakeview to I-15 NB Ramp Signal (11882):** Started integration.
- **Lehi; Main St @ US-89/State St Signal(s) (13668):** Project in design.

Region 4

- **St. George:** This project is complete, except for some city and UDOT fiber coordination. Pinetop is in the process of integration.
- **SR-9 Hurricane Signal interconnect:** This project is ready for advertisement.
- **Fiber upgrade for US-6, Helper and Price Signal Integration:** Hunt Electric will start working on this.
- **I-70 in Richfield:** In design.
- **Cedar City Fiber:** Under construction and is nearing completion.
- **Beaver Shed and Fiber HUB:** Under construction and is nearing completion.
- **Bryce Signal:** The contractor is looking into the splicing and construction details.

ITS Standards and Specifications

- Presented a course at the UDOT Engineer's Conference that discussed the changes in the 2017 ATMS Standards. Comparisons were made to show the differences between the 2012 Edition and the upcoming 2017 Edition.
- Began to scope the upcoming ATMS Design Manual of Instruction.

Procurement and Vendor Visits

- Charlie Loverso of Redline Radio products visited and discussed broadband radio usage in Nevada DOT ITS projects.
- Casey Williams and Kyle Niemeyer, Daktronics Sales Representatives visited and discussed the changes within the company. Kyle will replace Casey.

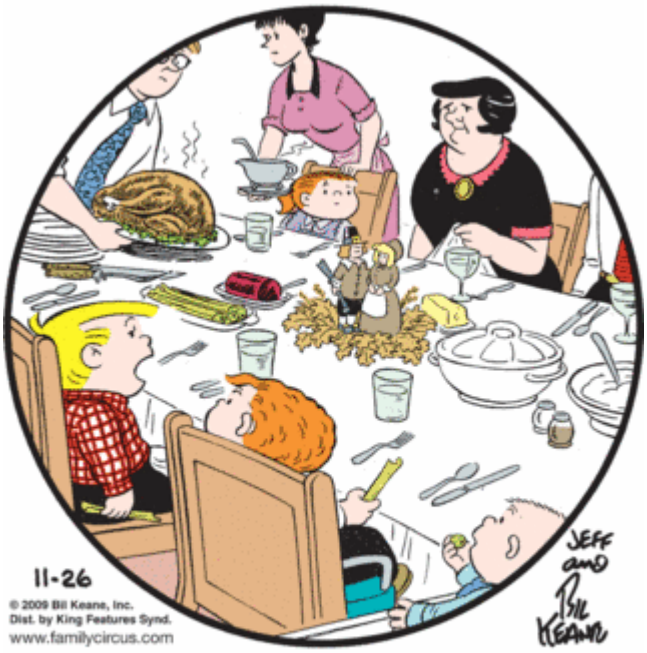
Special Activities

- Developed and instructed the 2017 ATMS Standards – What's New course for the Conference attendees.

    * Webinar – Supporting Freight Operations with ITS (1.0)
    * Webinar - Sustainable Urban Traffic Management Using Advanced Technologies (1.0)
    * Webinar – Connected Vehicle Workforce (1.5)

Special Projects

- Metro Area New VMS Project – Region 2 held kick off meeting for new VMS installations along I 215 NB, I-15 NB and SR 201



"I wish the Pilgrims had sent out for PIZZA on the first Thanksgiving 'stead of shootin' a turkey."

WETHER YOU

THINK YOU CAN,

OR THINK YOU CAN'T,

YOU'RE RIGHT.

(HENRY FORD)

Acronyms

CCTV	Closed Circuit Television	DPS	Department of Public Safety
EIS	Emergency Information System	HAR	Highway Advisory Radio
I2TMS	Integrated Interagency Traffic Management System		
ITS	Intelligent Transportation System	LFOT	Local Field Operations Test
MIC	Manager in Charge	MOT	Maintenance of Traffic
RWIS	Road-Weather Information System	TAC	Technical Advisory Committee
TMD	Traffic Management Division	TMS	Traffic Monitoring Station
TOC	Traffic Operations Center	VMS	Variable Message Sign

UDOT Keeping Utah Moving